IN THE CLAIMS:

1. (Currently Amended) An apparatus for communicating a link state routing protocol with nodes in a network, comprising:

a controller having at least one processor associated therewith for performing route calculation and maintaining a link state database of said network; and

at least one delegate port card coupled to said controller and having at least one separate processor associated therewith, said delegate port card having selected software functionality of said link state routing protocol assigned thereto for performing said selected functionality of said link state routing protocol including processing of incoming link state advertisement (LSA) updates, said delegate port card operable to process communications associated with said selected software functionality substantially independently of said controller.

2. (Currently Amended) The apparatus of Claim 1, wherein said routing protocol is selected from the group consisting of OSPF (Open Shortest Path First), PNNI (Private Network-Network Interface) and ISIS (Intermediate System to Intermediate System).

3. (Original) The apparatus of Claim 1, wherein said controller is updated when a state change therefor occurs.

4. (Currently Amended) The apparatus of Claim 1, wherein said delegate port card is operable to distribute link state advertisements assigned thereto by said controller and to perform acceptance checks for said link state messages served thereby.

5. (Canceled)

6. (Original) The apparatus of Claim 1, wherein said delegate port card is operable to perform refresh functionality for associated LSAs.

7. (Currently Amended)The apparatus of Claim 1, delegate port cards are operable to provide retransmission ~~timers~~ and acknowledgements for LSA updates.

8. (Original) The apparatus of Claim 1, wherein sending and receiving of hello packets is performed by the delegate port card.

9. (Original) The apparatus of Claim 1, wherein neighbor finite state machines are synchronized between said controller and said delegate port card, said controller being updated by said delegate port card upon a new event being generated for said neighbor finite state machine.

10~~1~~. (Currently Amended)The apparatus of Claim 1, wherein a LSA flood is initiated by said controller broadcasting said LSA to all port cards, wherein said port cards provide retransmission and acknowledgements ~~service~~ related thereto.

11~~2~~. (Currently Amended) The apparatus of Claim 1, wherein said controller floods a tic timer to all delegate port cards.

12~~3~~. (Currently Amended) The apparatus of Claim 11~~2~~1, wherein said delegate port cards send an acknowledgement after a given number of tics being received.

13. (Currently Amended) The apparatus of Claim 1, wherein LSA updates from delegate port cards are preprocessed before being sent to said controller in order to save processing time by said controller in processing said LSA updates.

14~~5~~. (Currently Amended) A distributed processing apparatus for enabling distributed functionality of OSPF (Open Shortest Path First) to be handled by delegate processors of a router, said router including a controller having at least one processor performing route calculation and maintaining a link state database in connection with a network, said apparatus comprising:

one or more communication ports for communicating to nodes in said network of said router; and

at least one processor operable to perform selected OSPF functionality substantially independent of said controller, said controller being updated upon receipt by said ~~port card~~processor of an altering event to a state machine in said controller.

15~~6~~. (Currently Amended) The apparatus of Claim 14, wherein said processor~~delegate port card~~ is operable to distribute link state advertisements assigned thereto by said controller and to perform acceptance checks for said link state messages served thereby.

16~~7~~. (Currently Amended) The apparatus of Claim 14, wherein said ~~delegate port card~~processor is operable to process incoming LSA (link state advertisement) updates.

17~~8~~. (Currently Amended) The apparatus of Claim 1, wherein sending and receiving of hello packets is performed by the ~~delegate port card~~processor.

18~~9~~. (Currently Amended) A method for communicating an intra-autonomous system (AS) link state routing protocol with nodes in a network, said method comprising:

performing route calculation and maintaining a link state database of said network on at least one processor of a controller device; and

providing selected software functionality of said intra-AS link state routing protocol for performing said selected functionality of said link state routing protocol including processing of incoming link state advertisement (LSA) updates on a distributed basis using a distributed processor operable to process communications associated with said selected software functionality substantially independently of said controller.

19~~20~~. (Currently Amended) The method of Claim 18~~9~~, wherein said controller is updated upon receipt by said distributed processor of an altering event to a state machine in said controller.